

Acoustic Liners Utilizing A Cementitious Material, Phase I

Completed Technology Project (2004 - 2005)

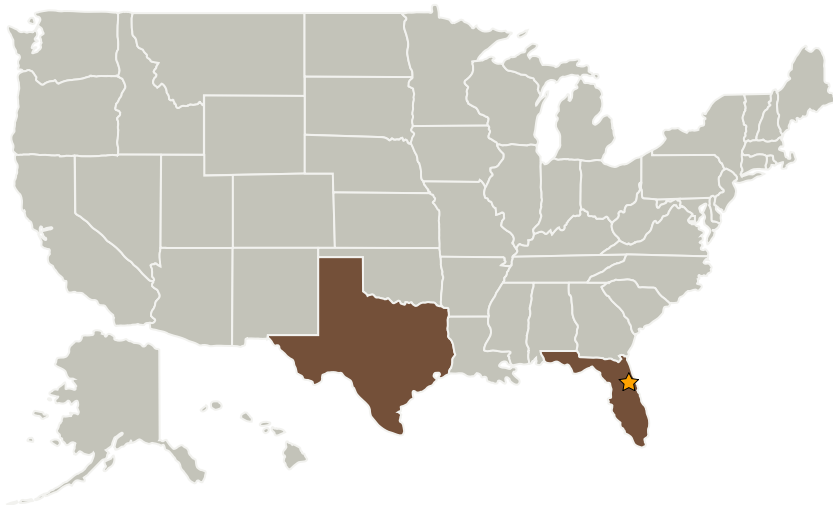


Project Introduction

In this Phase I STTR project for NASA, Concrete Solutions Inc (CSI), together with the University of Texas at Austin (UTA), will develop a detailed research plan that will provide for an acoustic liner that is capable of withstanding high exhaust temperatures up to 3,000 F over a range of sound frequencies. Using CSI's patented product, SoundSorb, a cementitious material that is used extensively in the transportation industry to attenuate the reflection of highway and railway noise, the CSI/UTA team will develop (1) Formulation and testing of SoundSorb, or variants thereof, that will meet the requirements of sound absorption, heat and vibration for the target application; (2) Develop an application system or process that can be used to manufacture acoustic liners of this material; and (3) Develop a scale model to validate and demonstrate that the material can meet or exceed the requirements of the liners.

SoundSorb[®] has been tested under several ASTM testing regimes required by various governmental and transportation organizations. It has passed all these tests for acoustic behavior, durability and extreme weather conditions. This project will show feasibility for use in this application. In Phase II, CSI/UTA will produce prototype liners for testing in actual launch conditions.

Primary U.S. Work Locations and Key Partners



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Organizational
Responsibility**Responsible Mission
Directorate:**

Space Technology Mission
Directorate (STMD)

Lead Center / Facility:

Kennedy Space Center (KSC)

Responsible Program:

Small Business Innovation
Research/Small Business Tech
Transfer

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Organizations Performing Work	Role	Type	Location
★ Kennedy Space Center(KSC)	Lead Organization	NASA Center	Kennedy Space Center, Florida
Concrete Solutions, Inc.	Supporting Organization	Industry	Austin, Texas

Primary U.S. Work Locations

Florida	Texas
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Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX14 Thermal Management Systems
 - └ TX14.3 Thermal Protection Components and Systems
 - └ TX14.3.1 Thermal Protection Materials